

Classification

Anticholinergic

Prehospital Indications

Cardiac Dysrhythmia: symptomatic bradycardia in adults; suspected AV Block or increased vagal tone in pediatrics

Hazmat exposure: organophosphate/pesticide/nerve agent poisoning with heart rate < 60 bpm, respiratory depression and/or extreme salivation

Other Common Indications

End-of-life care, to dry secretions for patient comfort

Eye disorders requiring mydriasis (pupillary dilation) for treatment/testing, administered as eye drop

GI disorders caused by hypermobility (chronic diarrhea, irritable bowel syndrome)

Adult Dose

Cardiac Dysrhythmia

0.5mg (5mL) IV/IO push repeat every 3-5 min prn, maximum total dose 3mg

Organophosphate poisoning

2mg (20mL) IV/IM/IO, may repeat every 5 min until patient is asymptomatic

Pediatric Dose

Cardiac Dysrhythmia

0.02mg/kg (0.1mg/mL) IV/IO, dose per [MCG 1309](#), may repeat x1 in 5 min

Organophosphate poisoning

0.05mg/kg (0.1mg/mL) IV/IM, may be repeated every 5 min, maximum total dose 5mg

Mechanism of Action

Competitively inhibits action of acetylcholine on autonomic effectors innervated by postganglionic nerves

Pharmacokinetics

Peak effect in 20-30 min IM, 2-4 min IV/IO, duration 4 hr

Contraindications

Glaucoma

Tachycardia

Thyrotoxicosis

Interactions

None for IV/IM/IO administration

Adverse Effects

Dry mouth / Thirst

Dysrhythmias

Flushed dry skin

Hypertension / Hypotension

Hyperthermia

Increased intraocular pressure

Mydriasis (pupil dilation)

Prehospital Considerations

- Use cautiously if myocardial infarction and/or ischemia is suspected, as atropine will increase myocardial O₂ demand, which may worsen the infarct.
- Bradycardia due to 2nd degree type II and 3rd degree heart blocks will not improve with atropine; if treatment indicated, transcutaneous pacing (TCP) should be performed.